

in the afternoon. From the 20th to 30th the weather was windy and cloudy, with daily rains in the northern range of the Cordillera. The short shower on the 21st, at San Jose, had no action whatever on the soil, which remains unusually dry and dusty. On the Atlantic slope the first half of the month was pretty dry, with only occasional showers; the second half rather wet.

Earthquakes.—April 13, slight tremors at 4h. 42m. p. m. April 16, 1h. 23m. p. m., strong shock, northwest to southeast; duration, 5 seconds; intensity, 2. April 30, 3h 33m. p. m., slight tremors.

TABLE 3.—Rainfall at stations in Costa Rica, 1901.

Stations.	January.		February.		March.		April.	
	Amount.	No. rainy days.	Amount.	No. rainy days.	Amount.	No. rainy days.	Amount.	No. rainy days.
1. Boca Banano.....	265	17	98	11	278	14	219	16
2. Limon.....	304	19	72	9	214	15	193	12
3. Swamp Mouth.....			131	10	241	13	302	11
4. Zent.....							246	14
5. Gute Hoffnung.....	411	15	106	14	224	12	235	11
6. Siquirres.....	408	10	45	4	160	8		
7. Guapiles.....	340	13	114	8			231	7
8. Sarapiquí.....							243	19
9. San Carlos.....	301	19	67	14	96	13	110	13
10. Las Lomas.....	521	16	131	10	181	14	66	4
11. Peralta.....	335	11	65	4	190	13	150	9
12. Turrialba.....							85	10
13. Juan Vinas.....	159	14	40	10	12	6	50	8
14. Santiago.....							66	9
15. Paraiso.....								
16. San Rafael C.....								
17. Tres Rios.....	2	1	5	1	0	0	2	1
18. La Palma.....								
19. S. Francisco G.....	7	2	9	1	26	1	1	1
20. San Jose.....	4	2	9	1	24	1	1	1
21. La Verbena.....			5	2	6	2	1	1
22. San Isidro Alajuela.....	0	0	1	1			8	1
23. Nuestro Amo.....			11	2	50	3	0	0
24. Sipurio.....					149	12	239	13

TABLE 4.—Zent (station of the United Fruit Company), April, 1901.

	7 a. m.	1 p. m.	6 p. m.	Mean.
Temperature (degrees)	22.27	28.86	25.58	25.73
Relative humidity (per cent)	90	69	84	79
Cloudiness (per cent)	53	59	60	58
Temperature of the soil (degrees).....	0.15 m.	27.38	27.32	27.66
	0.30 m.	27.43	27.35	27.39
	0.60 m.	27.69	27.67	27.63

Sunshine.							
Hours a m.	6-7	7-8	8-9	9-10	10-11	11-12	Total.
Per cent.....	0.54	12.48	15.91	16.44	16.63	14.67	.....
Hours p. m.	12-1	1-2	2-3	3-4	4-5	5-6	
Per cent.....	15-17	14.26	13.30	10.35	5.31	0.0	135.06

MONTHLY STATEMENT OF AVERAGE WEATHER CONDITIONS FOR APRIL.

By Prof. E. B. GARRIOTT.

The following statements are based on average weather conditions for April, as determined by long series of observations. As the weather of any given April does not conform strictly to the average conditions, the statements can not be considered as forecasts:

In the middle latitudes of the North Atlantic Ocean west of the thirtieth meridian storms are less frequent, while to the eastward of the thirtieth meridian and between the fortieth and sixtieth parallels storms are more frequent than during the preceding three months. There is an increase in

the number of foggy days from the Grand Banks to the coast of the United States, and icebergs are likely to be encountered near Newfoundland and the Grand Banks as far south as the forty-first parallel, and possibly to the fortieth parallel.

In the West Indies April is the last month of what is generally termed the dry season. The wet season, which begins in May, continues through October.

Although the well-marked wet season of the Pacific coast of the United States extends from October to March, the monthly rainfalls gradually diminish from December and January to July and August. The latter two months named cover a practically rainless period in that section. Over the interior of the United States a large proportion of the more important storms of April develop on the middle-eastern slope of the Rocky Mountains, and move thence north of east over the Lake region and New England. On the Great Lakes and along the middle Atlantic and New England coasts the near approach of a storm of this type is indicated by rapidly-falling barometer and increasing east to south winds.

In the trucking districts of the interior of the Gulf and South Atlantic States damaging frost is likely to occur in April. Frost is likely to occur in the early part of the month in the Pacific Coast States, in the region immediately bordering the Gulf of Mexico, and in the north half of the Florida Peninsula.

MEXICAN CLIMATOLOGICAL DATA.

Through the kind cooperation of Señor Manuel E. Pastrana, Director of the Central Meteorologic-Magnetic Observatory, the monthly summaries of Mexican data are now communicated in manuscript, in advance of their publication in the Boletín Mensual. An abstract, translated into English measures, is here given, in continuation of the similar tables published in the MONTHLY WEATHER REVIEW since 1896. The barometric means have not been reduced to standard gravity, but this correction will be given at some future date when the pressures are published in our Chart IV.

Mexican data for April, 1901.

Stations.	Altitude.	Mean barometer.	Temperature.			Relative humidity.	Precipitation.	Prevailing direction.	
			Max.	Min.	Mean.			Wind.	Cloud.
Leon (Guanajuato)...	5,901	24.25	89.1	45.7	69.3	81	0.03	nw.	sw.
Linares (Nuevo Leon)...	1,188	23.62	102.2	50.0	76.3	58	1.34	s.	s.
Mazatlan.....	25	23.87	79.0	60.4	70.3	76	.....	nw.	sw.
Mexico (Obs. Cent.)...	7,472	23.02	84.2	44.8	64.8	41	0.53	nw.	sw.
Morelia (Seminario)...	6,401	23.98	83.7	49.6	65.8	47	0.35	s.	w.
Puebla (Col. Cat.)...	7,125	23.36	84.0	50.0	67.5	43	0.40	e.	ws.
Saltillo (Col. S. Juan)...	5,399	24.73	87.8	42.8	65.1	63	2.16	ne.	s.
S. Isidro (Hac. de Gto)...	.....	.....	77.9	64.4	.....	.....	0.08	ne., w.	.....
Zapotlan (Seminario)...	5,078	25.04	89.6	49.6	70.7	63	.....	sse.	w.

RECENT PAPERS BEARING ON METEOROLOGY.

W. F. R. PHILLIPS, in charge of Library, etc.

The subjoined list of titles has been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau:

Popular Science Monthly. New York. Vol 59.
Cook, F. A. Aurora Australis. Pp. 21-33.